

## Science 225

**INSTRUCTORS:** **Rebecca Bendick**  
CHCB363  
[bendick@mso.umt.edu](mailto:bendick@mso.umt.edu)

Office Hours MW 10:00-11:00

Teaching Assistants: Chloe Boucher ([chloe.boucher@umt.edu](mailto:chloe.boucher@umt.edu))  
Gina Belair ([gina.belair@umt.edu](mailto:gina.belair@umt.edu))  
Shauni Seccombe ([shauni.seccombe@umconnect.umt.edu](mailto:shauni.seccombe@umconnect.umt.edu))

LECTURE: MWF 2:00 to 2:50 in room 110 in ISB  
Tuesday Labs: CHCB 013 (in the basement)  
Thursday Labs: CHCB 013

**TEXTBOOK:** **Conceptual Physical Science 6<sup>th</sup> ed.**

**MOODLE SITE:** You will need to access this site regularly. Announcements of importance and/or interest to the course will be posted on this site, along with all reading assignments, homework, laboratory exercises, handouts, useful web links, and any updates to the course schedule.

**COURSE CONTENT:** This course will introduce the basic principles of physical science, including scientific reasoning and scientific methods. The course materials have been designed specifically with the K – 8 education pre-certifier in mind and will relate directly to what you will be doing in your classrooms as you seek to fulfill your principal's requests that you teach the Science Education Standards. This semester includes a wide range of topics in Physics and Earth Science, including motion, force, and energy and how they relate to our planet and solar system. We will also explore Earth systems, the long history of our planet, and how human communities interact with resources.

**SCHEDULE:** A schedule of topics to be presented in the lecture and the labs is posted separately. This is intended as a broad outline of the course, and may be subject to change based on class interests and our progress through the content.

**iCLICKERS:** I will be using iClickers for this course. You can run the necessary software as an app on a smart phone, tablet, or laptop. If you need an account, you can get one here: <https://app.reef-education.com/#/login>. The software will take attendance and also record your participation in classroom activities. If you do not have any of these devices, please email me or talk to me, and I will make arrangements for you to get a device or have your participation counted.

**COURSE COMPONENTS:** To encourage different styles of thinking and learning, we will engage in a wide variety of activities.

**lectures:** Most of the underlying concepts will be introduced in the lecture. It is important to come and to be engaged. The textbook will supplement the lecture but cannot substitute for it. Some of the material presented in lecture will be posted on our web site. There will be times when material will be presented first in your laboratory as an exploration. Attendance will be recorded through iClickers, as will your participation in classroom activities.

**readings:** Readings from the textbook and other sources will be indicated in the weekly assignment.

**homework:** There will be a homework assignment due on Thursday of most weeks. Your responses will be submitted to your Laboratory TA at the beginning of the laboratory period on Thursday. These exercises will keep you up to date with the course material, give you some problem-solving experience, and encourage you to actively experiment with some of the course topics. Solutions to the homework problems will be provided the following week (Tuesday) on our Moodle site. Homework sets turned in after the beginning of your lab period but before 5pm Friday will be penalized 20%. Solutions handed in on Tuesday by 5pm will be penalized by 40%. After that they will not be accepted. To help you deal with the unforeseen, you may drop your lowest homework grade.

**labs:** Your weekly lab sections will give you a chance to explore the course material in a more informal, hands-on way. You will be responsible for downloading any laboratory materials from the Moodle site and bringing them to class with you on the appropriate day.

**projects:** There will be two longer term assignments. They will be described in detail as they are assigned.

**exams:** All exams will contain multiple choice, conceptual, and quantitative problems. The final is comprehensive.

**GRADING:** Your grade for this course will be based on the following:

ATTENDANCE AND PARTICIPATION	10%
MIDTERMS	30%
FINAL EXAM	20%
LABORATORY EXERCISES	20%
PROJECTS	10%
HOMEWORK	10%

**TIME MANAGEMENT:** The standard expectation for college courses is that two hours outside of class will be required for every one credit hour in class. This is a five credit course, so you should expect to spend an average of 15 hours/week on this course. Do not take this course unless you have the time to devote to it.

For those of you planning to become teachers, it is important that you realize that this is NOT a science methods class, although I will do my best to model good science teaching pedagogy. The sole purpose of this class is to give you some background in physical science content. C&I 404 will address the latest educational research on effective methods of science teaching.

## **COURSE POLICIES:**

1. Exams must be taken at the scheduled times unless a make-up time is arranged BEFORE the exam. Make-up exams will only be given for exceptional emergencies for which written documentation can be provided. The final MUST be taken at the time scheduled by the registrar.
2. Homework assignments are due at the BEGINNING of the lab period on the date specified in the assignment.
3. You cannot switch discussion or lab sections without prior permission from your TA.
4. Attendance will be taken in class and in lab sections. Absences may be excused at the discretion of the instructor with proper written verification of an unusual responsibility or emergency. Students who show up for the first few minutes of the class and then leave will be counted as absent.
5. For excused absences from discussion or lab sections, notification by phone, e-mail, etc. MUST be given BEFORE the section begins (except for documented emergencies). Excused LAB absences will be credited as an average of all of your other lab grades.
6. You must attend the lab sessions in order to write and submit lab reports. An unexcused lab absence will result in zero credit for that lab.

## **RESOURCES**

Students with disabilities may request reasonable modifications by contacting me. The University of Montana assures equal access to instruction for students with disabilities in collaboration with instructors and Disability Services for Students, which is located in Lommasson Center 154. The University does not permit fundamental alterations of academic standards or retroactive modifications.

Math tutoring is located at the MC learning center. Drop in hours are Tues, Weds, and Thurs. 1:00-3:00 pm. To **Make appointments outside of drop in hours please contact at least 1 day in advance** by calling: 406-243-7826, emailing: [betsy.cincoski@mso.umt.edu](mailto:betsy.cincoski@mso.umt.edu), or stopping by: MC022

The Student Advocacy Resource Center (SARC) provides free and confidential support to survivors of sexual assault, relationship violence, stalking, hate crimes, harassment, or other forms of discrimination. Our services include counseling as well as medical, legal, and academic advocacy. SARC is a confidential resource – contacting us does NOT mean that you are making a report to law enforcement or Title IX. You deserve to be safe, supported, and treated with care

and respect. We also offer help to your friends, family, or partners. SARC is located in Curry Health Center, Room 108. Please visit us or call our office at 243-4429. Advocates are available on the 24-hour support line (406) 243-6559.

Mental and Physical health services are available at Curry Health center. For counseling services call 406-243-4711 to make an appointment, or schedule on line through our health portal [www.umt.edu/hportal](http://www.umt.edu/hportal). For crisis, after-hours care call the National Suicide Lifeline at 1-800-273-8255, contact the Crisis Text line: text MT to 741-741, or contact your nearest Emergency Department. For medical, walk in appointments are available or call to make an appointment: 406-243-4330. *For an In-Progress Emergency call 9-1-1 or (406) 243-4000 (x4000 from a UM phone)*

The Office for Student Success helps students to meet three goals: transition smoothly to college, remain enrolled and progress in a program of study, and graduate in a timely manner. For support in any of these fields go to 269 Lommasson Center, call 406-243-2800, or email [OfficeforStudentSuccess@mso.umt.edu](mailto:OfficeforStudentSuccess@mso.umt.edu)